

REMARKS

Claims 1-45 are pending, while claims 1-45 stand rejected. Applicant acknowledges the allowable subject matter indicated with respect to claims 2 and 31 and cordially thanks the Examiner for indication of the same. Claims 1, 3-5, 7, 20, 22, 30, 32, 33, and 36 have been amended, leaving claims 1- 45 for consideration upon entry of the present amendment. No new matter has been added.

Drawings

The drawings stand objected to because the Examiner alleges that the enclosed Figures do not illustrate an imaging system wherein the first radiation detector is disposed to be non-adjacent to the second radiation detector (see claims 4 and 33). The Examiner alleges that a proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. Applicant respectfully traverses.

It is respectfully submitted that Figure 4B depicts what is claimed in amended claims 3 and 32, i.e., "first radiation detector [68] is disposed so as to be adjacent to said second radiation detector [68] relative to said Z axis." Figure 4B identifies the Z axis or Z direction substantially normal to the gantry in an X-Y plane. In like manner, Figure 2B depicts what is claimed in amended claims 4 and 33, i.e., "first radiation detector [16] is disposed so as to be non-adjacent to said second radiation detector [18] relative to said Z axis and adjacent thereto with respect to said X-Y plane." Again, Figure, 2B identifies the Z axis or Z direction substantially normal to the gantry in an X-Y plane.

Accordingly, it is respectfully requested that the objections to the drawing be withdrawn.

Claim Objections

Claims 5, 22 and 36-45 stand objected to because the Examiner alleges that there is no antecedent basis for the use of the term "said radiation source" with respect to claim 5.

Claim 5 has been amended to recite --said x-ray source-- finding antecedent basis in claim 1.

Claim 22 stands objected to because claim 22 recites dependency directed to claims 20 and 23. Claim 22 has been amended to depend from claim 20.

Accordingly, it is respectfully requested that the objections to claims 5 and 22 be withdrawn.

Claim Rejections -35 USC §112

Claim 7 and 36 - 45 stand rejected under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. In particular, the Examiner points to the preamble of claim 7 recites: "A method for differentiating material characteristics comprising: However, the Examiner notes that there are no recited steps for differentiating material characteristics as suggested by the preamble.

Claim 7 has been amended having a preamble that recites: "A method of imaging using a hybrid scintillation/direct conversion imaging system for differentiating material characteristics, the method comprising:"

Claim 36 recites: "A computer data signal comprising: code configured to cause a processor to implement a method ... the method further comprising:" The Examiner notes that it is unclear what the claim is directed and suggests that claim 36 be rewritten as follows: "~~A computer data signal comprising: code configured to cause a processor to implement a method . . . the method further comprising:~~" Claim 36 has been amended as suggested by the Examiner.

Accordingly, it is respectfully requested that the rejections to claims 7 and 36-45 be withdrawn.

Claim Rejections -35 USC § 101

Claims 36-45 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. In particular, the Examiner alleges that claims 36-45 appear to be directed to a computer data signal. The Examiner alleges that as best

understood by the Examiner, the claimed signal appears to refer to an impulse or a fluctuating electric quantity, such as voltage, current or electric field strength, to trigger or implement a process and that the claims as written are not patentable, since the subject matter represents a form of natural phenomena (see MPEP 2105).

Claim 36 has been amended as suggested by the Examiner rendering this rejection moot. Accordingly, it is respectfully requested that the rejection to claim 36, including claims depending therefrom, i.e., claims 37-45, be withdrawn.

Claim Rejections -35 USC §102

Claims 1, 3, 4-8, 10-13, 15-17, 20-23, 25-27, 30, 36-39 and 41-43 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Sivers* (U.S. Patent No. 6,072,851). Applicant respectfully traverses.

As per claims 1 and 30, the Examiner alleges that *Sivers* discloses a computed tomography (CT) imaging system (20) comprising a gantry (22) wherein the gantry defines a patient cavity (34) and includes an X-ray source (24) and a radiation detection apparatus, wherein the radiation detection apparatus includes a first radiation detector (26) and a second radiation detector (28) and wherein the X-ray source (24) and radiation detection apparatus (26, 28) are rotatably associated with the gantry (22) so as to be separated by the patient cavity (34); a patient support structure (32) and a processing device (40).

In addition, the Examiner has indicated that claims 2 and 31 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As per claims 2 and 31, the Examiner has found no reference in the prior art that disclosed or made obvious a computed tomography (CT) imaging system wherein the first radiation detector is a scintillator/photo-sensor detector and wherein the second radiation detector is a direct conversion detector.

Independent claims 7, 20, and 36, have been amended to include this limitation. Thus, claims 7, 20, and 36, including claims depending therefrom, i.e., 8-19, 21-29, and 37-45, define over the prior art.

Furthermore, it is respectfully submitted with respect to independent claims 1 and 30, that *Sivers* does not teach or suggest, and in fact teaches away from, said first radiation detector is a different type of detector than said second radiation detector, said second radiation detector configured to count attenuated x-rays and measure the energy of said attenuated x-rays, as in amended claims 1 and 30. *Sivers* discloses a single x-ray source 24 using two, stacked detector arrays 26, 28 enabling helical-scan data to be collected in half the time required for a single-detector-array, helical scanning. (Col. 10, lines 59-60, see also FIGS. 1 and 2). "Each detector array 26 *or* 28 is provided with a plurality of conventional detector elements disposed on an inwardly facing circumferential surface of gantry 22. The detector elements in array 26 or 28 are preferably arranged in a single row that extends over an arcuate portion of the inwardly facing gantry surface." (Emphasis added.) Col. 3, line 65 - Col. 4, line 3. Thus, *Sivers* teaches away from employing different types of detectors and a detector configured to count attenuated x-rays and measure the energy of said attenuated x-rays, as in claim 1 and 30.

Thus, claims 1 and 30, including claims depending therefrom, i.e., claims 2-6 and 31-35, define over *Sivers*, as well as the prior art of record.

Claim Rejections -35 USC §103

Claims 5, 9, 14, 15, 24 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Sivers* (U.S. Patent No. 6,072,851) as applied to claim 1 above, and further in view of *Hsieh et al.* (U.S. Patent No. 6,421,412). Furthermore, claims 18, 19, 28, and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Sivers* (U.S. Patent No. 6,072,851) as applied to claims 1, 20 and 36 above and further in view of *Yan et al.* (U.S. Patent No. 6,324,240). Applicant respectfully traverses.

As discussed above and admitted by the Examiner, none of the prior art of record discloses or makes obvious a computed tomography (CT) imaging system wherein the first radiation detector is a scintillator/photo-sensor detector and wherein the second radiation detector is a direct conversion detector.

Independent claims 7, 20, and 36, have been amended to include this limitation. Thus, claims 7, 20, and 36, including claims depending therefrom, i.e., claims 8-19, 21-29, and 37-45, define over the prior art.

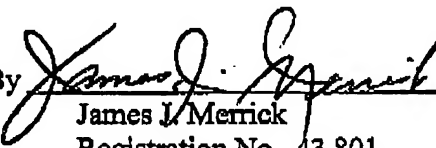
In addition, none of the prior art of record discloses or makes obvious a computed tomography (CT) imaging system wherein the first radiation detector is a different type of detector than the second radiation detector, the second radiation detector being configured to count attenuated x-rays and measure the energy of said attenuated x-rays, as in amended claims 1 and 30. Thus, claims 1 and 30, including claims depending therefrom, i.e., claims 2-6 and 31-35, define over the prior art.

Moreover, it is respectfully pointed out that the teachings of either Hsieh et al. or Yan et al. do not cure the deficiencies noted above with respect to Sivers et al. Thus, it is respectfully requested that the rejection to claims 5, 9, 14, 15, 18, 19, 24, 28 and 34 be withdrawn.

Accordingly, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered. If any fees are due with respect to this Amendment, please charge them to Deposit Account No. 07-0845 maintained by Applicants' attorneys.

Respectfully submitted,
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